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DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

O. H. TITTMANN, SUPERINTENDENT

INSIDE ROUTE PILOT

COAST OF NEW JERSEY

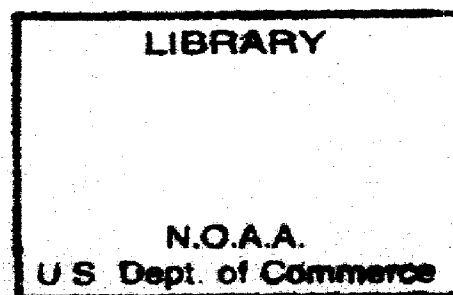
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CONTENTS.

	Page.
Note.....	5
Inland waters, coast of New Jersey, general information:	
Shark River Inlet.....	5
Manasquan Inlet.....	5
Barnegat Bay to Cold Spring Inlet.....	6
Supplies.....	6
Repairs.....	6
Pilots.....	6
Ice.....	7
Bridges; bridge regulations.....	7
Fish weirs.....	7
Tides, table of.....	8
Currents.....	9
Aids to navigation.....	9
Directions, Bay Head to Cold Spring Inlet:	
Bay Head to Beach Haven.....	10
Beach Haven to Atlantic City.....	11
Atlantic City to Ocean City.....	12
Ocean City to Anglesea.....	12
Anglesea to Cold Spring Inlet.....	13
Barnegat Bay.....	14
Manahawken Bay to Great Bay.....	17
Brigantine Inlet to Atlantic City.....	20
Atlantic City to Ocean City.....	23
Ocean City to Anglesea.....	25
Anglesea to Cold Spring Inlet.....	27
Agencies of the Coast and Geodetic Survey.....	29
Index.....	31

DEPARTMENT OF COMMERCE,
UNITED STATES COAST AND GEODETIC SURVEY,
Washington, D. C., March 1, 1915.

This publication covers the inlets and interior waters on the coast of New Jersey between Sandy Hook and Cape May, and is a part of Coast Pilot, Section C, now in preparation, which covers the coast from Sandy Hook to Cape Henry, including Delaware and Chesapeake Bays.

It is based upon surveys by the Coast and Geodetic Survey, United States Engineers, and State of New Jersey Department of Inland Waterways, and other important data furnished by these departments and by local pilots, fishermen, and boatmen.

The information was gathered and compiled by L. A. Potter, nautical expert, under the direction of Herbert C. Graves, nautical expert, chief of the Coast Pilot Section, in the office of J. J. Gilbert, inspector of hydrography and topography.

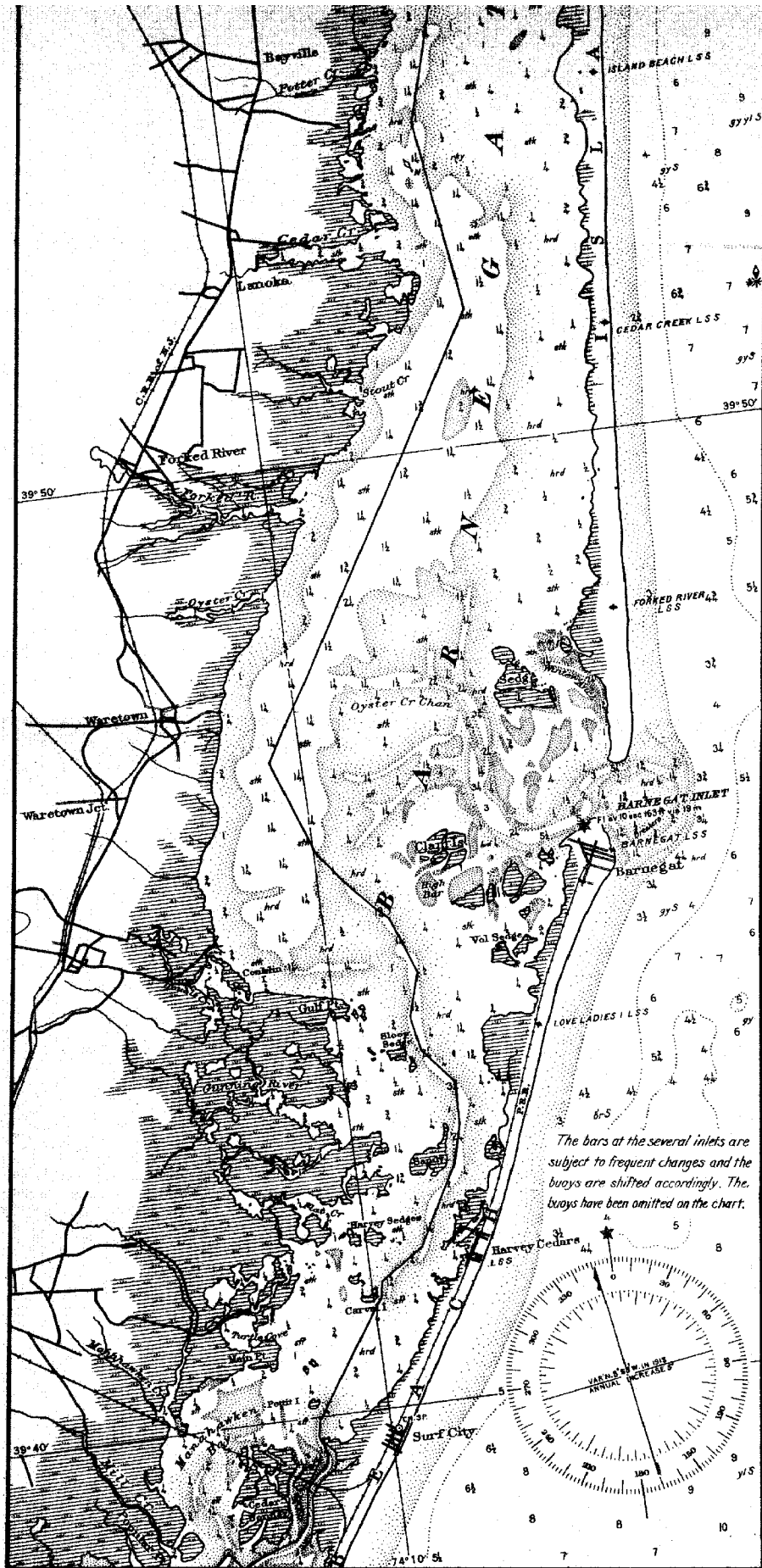
Navigators are requested to notify the Superintendent of the United States Coast and Geodetic Survey of any errors or omissions they may find in this publication, or of additional matter which they think should be inserted for the information of mariners.

O. H. TITTMANN,
Superintendent.



Scale $\frac{1}{80000}$
SOUNDINGS IN FATHOMS
AT MEAN LOW WATER.

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U. S. COAST AND GEODETIC SURVEY

INLAND WATERS

COAST OF NEW JERSEY

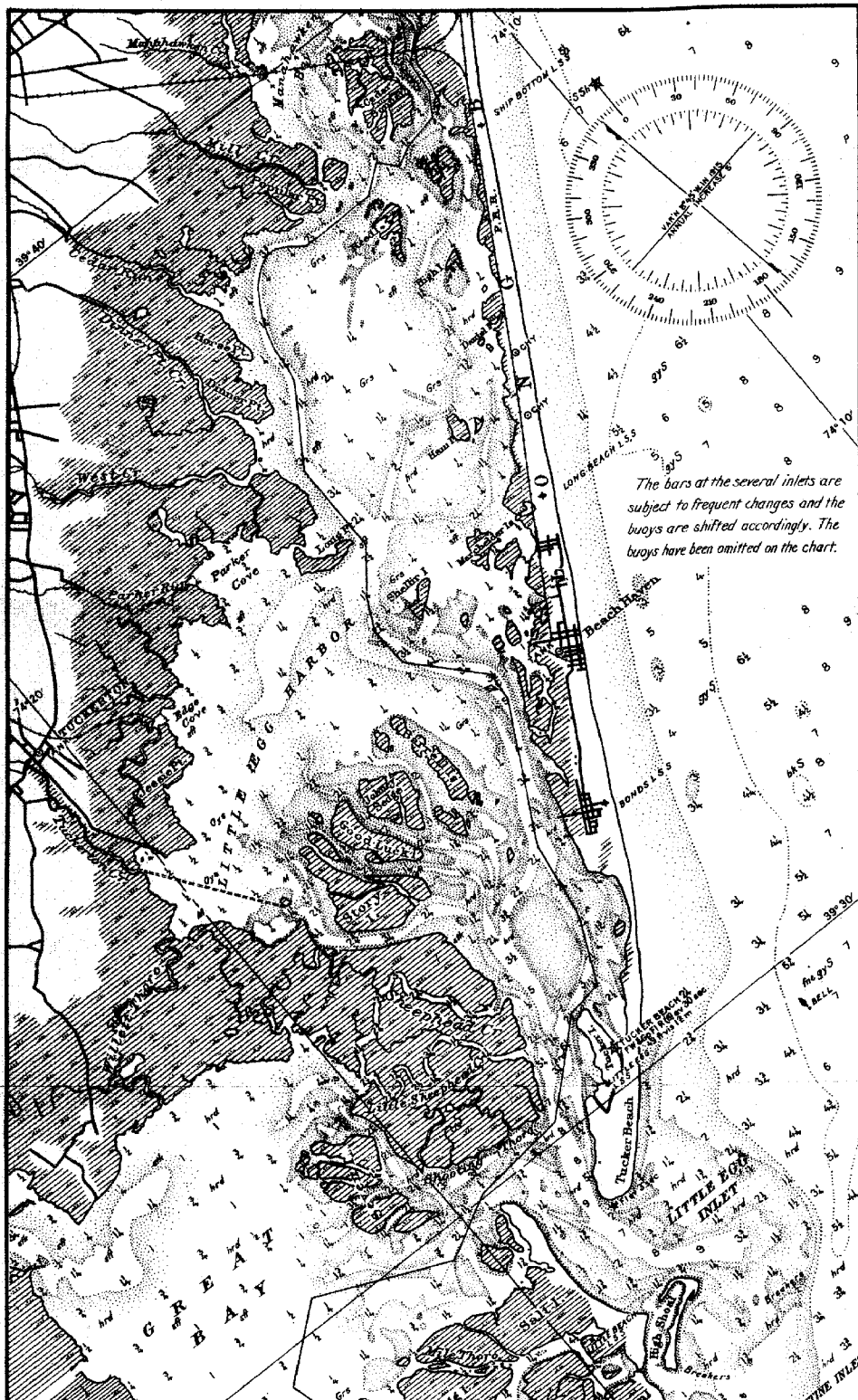


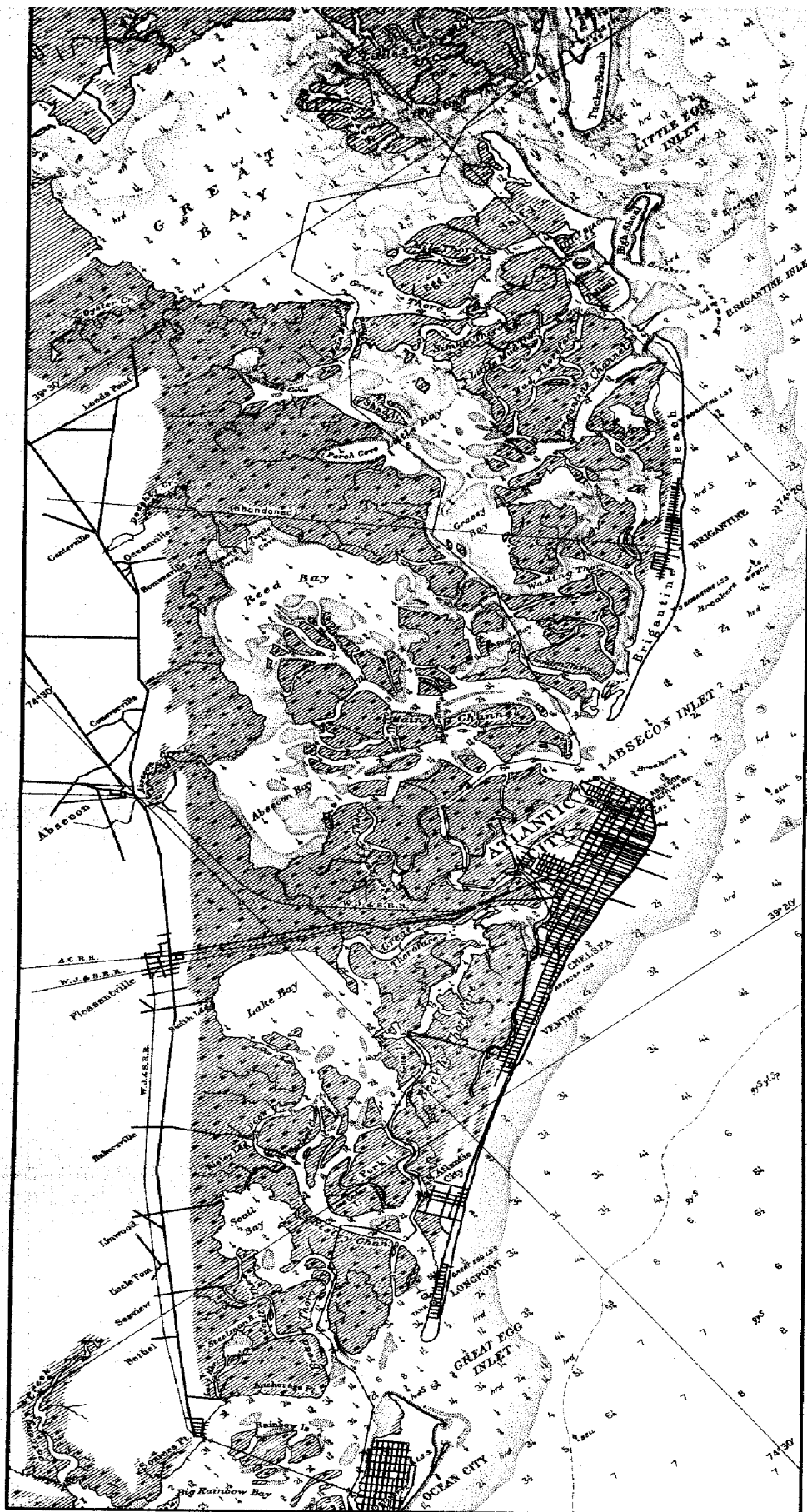
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SOUNDINGS IN FATHOMS
AT MEAN LOW WATER

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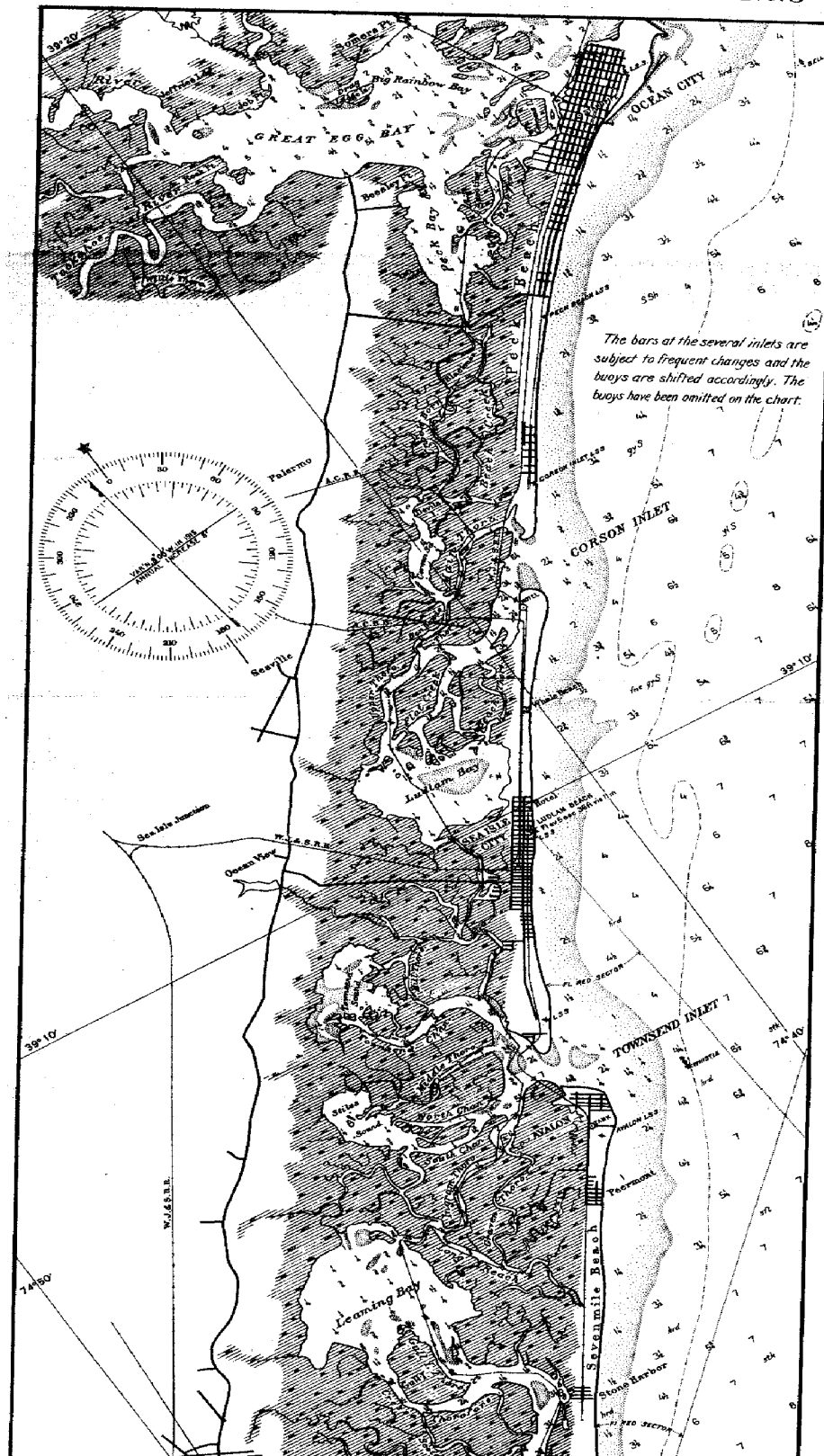
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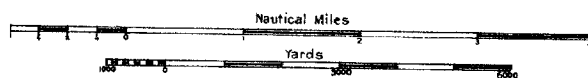
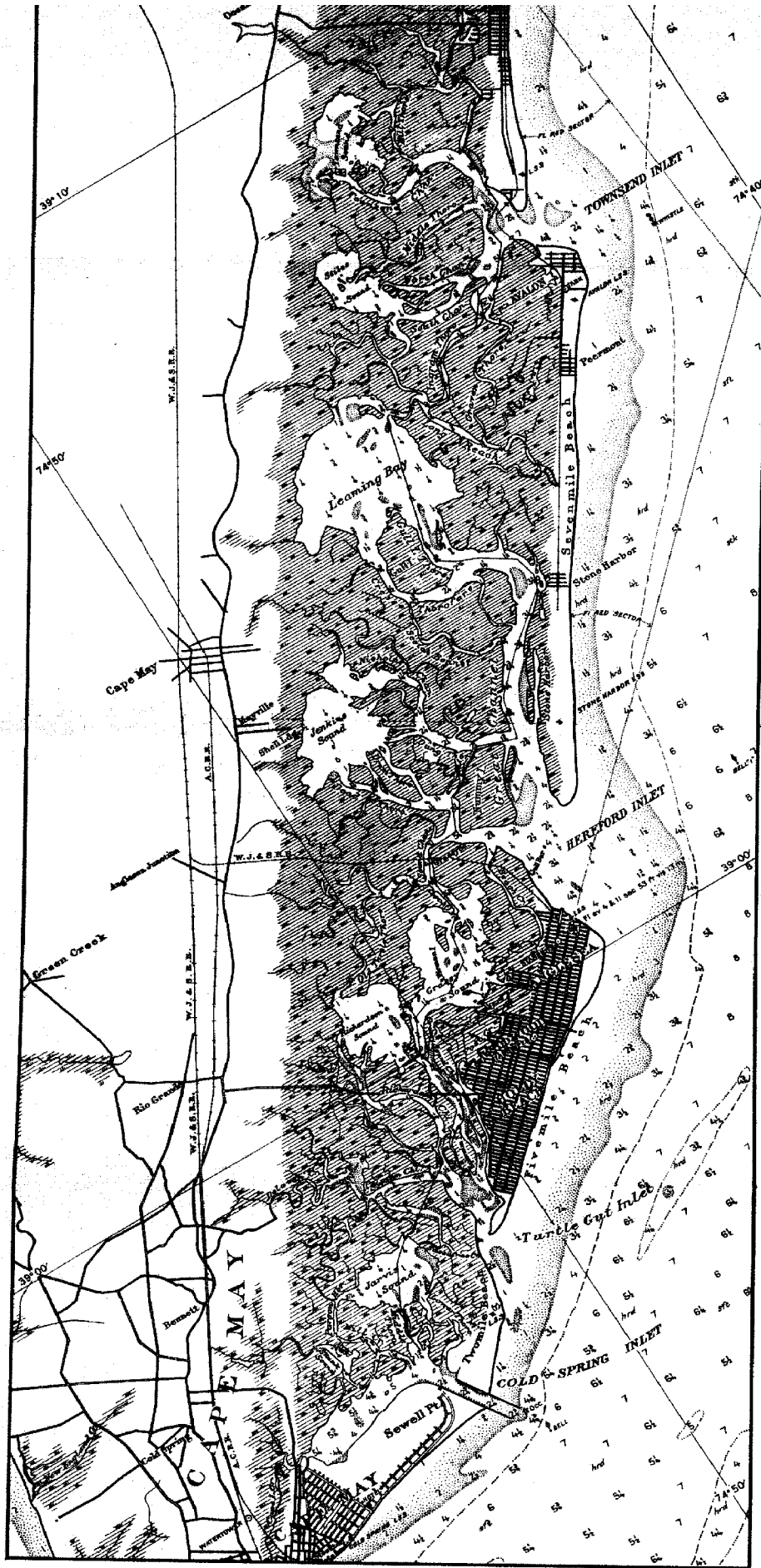
INLAND WATERS
COAST OF NEW JERSEY



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SOUNDINGS IN FATHOMS
AT MEAN LOW WATER

No. 3





INSIDE ROUTE PILOT, COAST OF NEW JERSEY.

NOTE.

The courses and bearings given in degrees are *true*, reading clockwise from 0° at north to 360°, and are followed by the equivalent *magnetic* value in points in parentheses. General directions, such as northeastward, west-southwestward, etc., are magnetic.

Distances are in *nautical miles*, and may be converted approximately to statute miles by adding 15 per cent to the distances given.

Currents are expressed in knots, which are nautical miles per hour.

Except where otherwise stated, all depths are at *mean low water*.

INLAND WATERS, COAST OF NEW JERSEY.

The coast of New Jersey from Sandy Hook southward to Barnegat Inlet, a distance of 43 miles, is broken by several small inlets; but the inside waters are not connected, and boats bound southward from New York must pass outside for this distance. The inlets are shoal and of little use at present except to local boats. Shark River Inlet and Manasquan Inlet are the only ones that can be entered from sea.

Shark River Inlet is being improved by the State of New Jersey by the construction of retaining walls on both sides at the entrance and a jetty 300 feet long on the north side to protect the entrance and form a harbor for small boats. In February, 1915, the cut had not yet been made through the beach, and the natural channel farther north had little depth. From just inside the inlet to the first bridge, the river is bulkheaded on the south side and has been dredged by private enterprise to a depth of 15 feet from the bulkhead northward for about two-thirds the width of the channel. There are two fixed bridges crossing the river, $\frac{3}{4}$ mile westward of the inlet, with a headroom of 4 or 5 feet and a depth of 3 feet at high water. The bay westward of the bridges has a depth of 1 to 3 feet and is only frequented by small boats of about 2 feet draft. Gasoline and provisions can be had below the bridges.

Manasquan Inlet has a narrow changeable entrance, with a depth across the bar in 1914 of about 3 feet, but it is sometimes almost entirely closed. It is not used except by small boats in case of necessity. The river has a general depth of 4 to 5 feet for $4\frac{1}{2}$ miles from the inlet and is navigable for small boats to Manasquan Park, about 7 miles from the inlet. It is frequented by fishing and pleasure boats of about 2-foot draft. Three drawbridges cross the river, the least

width of span being 30 feet and least headroom 3 feet at high water. The range of tide inside is about 1 foot.

Barnegat Bay and the bays and connecting channels southward form a continuous inside waterway from Bay Head to Cold Spring Inlet. The inside waters are entered from seaward by a number of inlets with shifting entrances, in most cases marked by buoys. The inlets and interior waters give access to the large number of summer resorts along the beach and many villages on the mainland adjacent to them. They are used by many pleasure boats and boats engaged in the oyster and clam industry and inside and outside fishing. There is considerable passenger and general freight business between points inside, but little coasting trade.

Improvements have been in progress by the State of New Jersey for several years to form an inland waterway from Bay Head to Cold Spring Inlet, with a depth of 6 feet and width of 100 feet. The work has been completed to project dimensions, with the exception of short stretches at Great Bay and the northern end of Barnegat Bay, but some shoaling has occurred in places. The waterway follows the natural channels in the bays and thoroughfares, joined by many cut-offs and connecting canals. In 1914 a draft of about $4\frac{1}{2}$ feet at low water could be carried from Bay Head to Cold Spring Inlet, except for a shoal inside of Turtle Gut Inlet, which has a depth of $2\frac{1}{2}$ feet. By taking advantage of the tide at this point, the passage is good at all times for boats of $4\frac{1}{2}$ feet draft or more. It is marked throughout its entire length, as described under "Aids to Navigation" following.

Supplies.—Gasoline, provisions, and water can be obtained at practically all of the villages and resorts along the interior waters. In summer, supplies of this kind can often be obtained at the bridges. Coal can be had at Atlantic City and in limited quantities at Ocean City and others of the larger places. There are telephones at all places and telegraph at the principal railroad stations.

Repairs.—There are railways capable of hauling out most of the boats navigating the inside waters at Bay Head, Tuckerton, Atlantic City, Ocean City, Stone Harbor, and Cold Spring Inlet; and there are smaller railways at Island Heights, Forked River, and Sea Isle City. Shops for ordinary repairs to hulls and motors are located at Bay Head, Atlantic City, and Ocean City.

Pilots.—There are no regular pilots for the inside passages or the inlets; but any of the local boatmen are competent pilots. In good weather there are fishing boats outside all of the inlets, and strangers can obtain a fisherman for a pilot, or signal may be set off the town nearest the inlet, and one will come off from shore. In places where there are no towns near the inlets, a member of the life-saving crew will usually go out if a signal is set.

Ice.—The inside waters are entirely closed to navigation by ice during extreme winters. During ordinary winters the more open channels, especially near the inlets where the currents are strong, remain open during most of the winter, though ice always forms on the flats. The inlets themselves are rarely closed by ice, though navigation through them is often rendered difficult by running ice. All of the principal inlets and the channels adjacent to them are used in winter by local fishing and oyster boats, but through navigation is usually blocked.

Bridges.—All bridges crossing the inland waterway have draw openings. New bridges crossing the inland waterway are required to have draw openings not less than 50 feet wide. The older bridges have draw openings about 30 feet or more wide, those with less width being the old bridge at the south end of Peck Bay, width of draw 21.6 feet, and the railroad bridge at Sea Isle City, width of draw 25.4 feet.

Bridge regulations are prescribed for the two railroad bridges crossing Beach Thoroughfare at Atlantic City. The whistle signal for all bridges is three blasts.

Fish weirs may be found along the seacoast between Sandy Hook and Toms River at distances between $\frac{1}{4}$ and $1\frac{1}{4}$ miles offshore, except in front of life-saving stations, where a belt $\frac{1}{2}$ mile wide inshore and $1\frac{1}{2}$ miles wide offshore must be left clear.

Fish weirs between Island Beach Life-Saving Station and Cape May are limited to the following areas: Inside of a line $1\frac{1}{4}$ miles offshore between Island Beach Life-Saving Station and Barnegat Inlet; inside of a line between points 2 miles south-southeastward of Barnegat Lighthouse and $2\frac{5}{8}$ miles eastward of Tucker Beach Lighthouse; inside of a line between points $1\frac{1}{4}$ miles offshore abreast Chelsea and $2\frac{3}{8}$ miles offshore abreast Stone Harbor Life-Saving Station, Hereford Inlet; and within a distance of 2 miles of shore between Hereford and Turtle Gut Inlets. Belts approximately 2 miles wide at the inshore end and wider at the outer end are left clear in front of each inlet. Fish weirs are permitted on the shoalest part of Five Fathom Bank in a belt 7 miles long north and south (true) and 2 miles wide; but a track with a least width of about 5 miles is left clear of fish weirs inside of Five Fathom Bank.

All fish weirs are required to be marked by fixed lights, a white light on the outer end and a red light on the inner end.

Tides.—In the inland waterways the tides are greatly affected by winds, both in time and height, westerly winds producing low water and easterly winds high water. In Barnegat Bay, northerly and southerly winds drive the water to the ends of the bay.

With strong winds of long duration the change in depth may amount to a maximum of 3 feet or more above or below the normal

high or low water, respectively, and the time of high or low water may be accelerated or retarded by more than an hour.

The tides meet in the vicinity of Manahawken Bay; Little and Grassy Bays; junction of Beach and Great Thoroughfares, west side of Atlantic City; Crook Horn Thoroughfare; Ben Hands Thoroughfare; Ludlam Bay; Leaming Bay; southwest end of Grassy Sound; and Jarvis Sound.

The following table is intended for use with the daily predictions for Sandy Hook, which are contained in the Tide Tables for the Atlantic Coast of the United States, including Canada and the West Indies, published annually in advance by the United States Coast and Geodetic Survey. These tables furnish, at the nominal cost of 10 cents, full tidal information for the Atlantic and Gulf coasts of North America.

In the following table, apply time differences, according to sign, to the times of high and low waters at Sandy Hook, N. J., plus (+) indicating that the tide is later than at Sandy Hook, and minus (−) that it is earlier.

Place.	Mean range.	Time difference.	Place.	Mean range.	Time difference.
BARNEGAT BAY.			LITTLE EGG INLET—		
	<i>Feet.</i>	<i>h. m.</i>	continued.	<i>Feet.</i>	<i>h. m.</i>
Bay Head.....	0.7	+5 21	Great Bay Entrance...	2.9	+0 36
Kettle Creek.....	0.7	+4 42	Deep Point, Mullica		
Island Heights.....	0.7	+3 34	River.....	2.6	+1 13
Seaside Park.....	0.8	+3 16	Main Marsh Thorough-		
Cedar Creek.....	0.9	+2 20	fare.....	2.8	+0 48
Forked River.....	1.1	+1 52	Simkins Thoroughfare.	2.9	+0 58
Waretown.....	1.2	+1 30			
Barnegat Inlet.....	2.2	+0 15	ABSECON INLET.		
Double Creek.....	1.1	+1 45	Grassy Bay.....	3.2	+1 21
Harvey Cedars.....	1.2	+2 35	Golden Thoroughfare..	3.6	+0 54
LITTLE EGG INLET.			Atlantic City, Gard-		
Cedar Bonnet.....	1.4	+3 00	ners Basin.....	3.8	−0 06
Dinner Point.....	1.8	+2 32	Atlantic City, near		
Long Point.....	2.3	+2 10	bridges.....	3.6	+1 08
Beach Haven.....	2.4	+1 42	Ventnor.....	3.4	+1 21
Bonds Life - Saving			GREAT EGG INLET.		
Station.....	2.6	+1 14	S. Atlantic City.....	3.8	+0 28
Little Egg Life-Saving			Risley Channel.....	3.8	+0 18
Station.....	3.0	+0 30	Longport.....	3.9	+0 06
Little Egg Inlet.....	3.3	+0 07			

Place.	Mean range.	Time difference.	Place.	Mean range.	Time difference.
GREAT EGG INLET— continued.			HEREFORD INLET.		
				<i>Feet.</i>	<i>h. m.</i>
Ocean City, Fourth Street.....	3.7	+0 16	Leaming Bay.....	3.4	+1 07
Ocean City, Thirty-fourth Street.....	3.0	+1 01	Stone Harbor.....	3.3	+1 07
			Great Channel.....	3.6	+0 42
CORSON INLET.			Grassy Sound Channel.....	3.6	+0 32
Crook Horn Thoroughfare.....	4.0	+0 57	Grassy Sound.....	3.6	+0 42
Ben Hands Thoroughfare.....	4.0	+0 34			
			TURTLE GUT INLET.		
TOWNSEND INLET.			Richardson Channel...	4.0	+0 18
Sea Isle City.....	4.0	+0 50	Swann Channel.....	4.2	+0 18
Townsend Inlet.....	4.2	-0 03			
			COLD SPRING INLET.		
			Jarvis Sound.....	4.4	+0 28
			Middle Thoroughfare..	4.4	+0 10
			Cold Spring Inlet.....	4.4	+0 02

Currents.—The currents have considerable velocity in the inlets and the narrow channels connecting the inlets with the adjacent bays and sounds. No observations are available, but it is estimated that current velocities of as much as 3 knots may be experienced at times in places of maximum velocities.

Aids to navigation.—Most of the inlets are marked by buoys, usually a bell or gas buoy outside the bar and a line of perpendicularly striped buoys to mark the best water until inside the inlet; but the bars are shifting in position and depth, and the buoys do not always lead in the best water. Breakers form on the shoal areas even in ordinary weather and are often a good guide.

The following portions of the inland waterway will be marked about May, 1915, by the Lighthouse Service: Barnegat Bay from Cedar Creek to Sandy Island; Little Egg Harbor and Great Bay from Beach Haven to Main Marsh Thorofare; and in the vicinity of Great Egg Inlet, from Shelter Island to Ocean City. The marks will be red or black buoys and beacons, numbered from north to south, the red marks on the starboard side of the channel and black on the port side when bound southward.

The remainder of the inland waterway is marked by stakes, beacons, and buoys maintained by the State of New Jersey. The buoys are removed before the freezing of the channels and the stakes and beacons are left in position but are usually carried away during the winter, and all are restored about May of each year.

Black and white striped buoys, either barrels or small spars, are used to mark the deeper and more open channels. They are usually intervisible, and can be passed close to on either side.

Beacons, either red or black, made of painted nail kegs supported by three stakes, are used at important angles and places where there are branches in the channels. They are often arranged in pairs, with the channel midway between them. The aids are placed for vessels bound south; when bound south red beacons will be left to starboard and black to port.

Small stakes, with cross arms either red or black, are used on both sides in shoal water to indicate the position of the channel. When bound southward the red stakes are left to starboard and the black to port.

DIRECTIONS, BAY HEAD TO COLD SPRING INLET.

The directions and description following are written for use with the accompanying sections of charts 1216, 1217, and 1218, published by the Coast and Geodetic Survey.

BAY HEAD TO BEACH HAVEN, 37 MILES, LEAST DEPTH $4\frac{1}{2}$ FEET.—From the wharves at Bay Head, the channel leads southward in mid harbor, close around the marshy point $\frac{5}{8}$ mile southward of the wharves, in midstream eastward of a large and a very small island, and then leads for the draw of the bridge at *Mantoloking*. Either opening can be used. The channel is marked by beacons and stakes.

There is a shoal on the west side below the bridge, which can be avoided by keeping well to the eastern side abreast the water tank. Then the channel leads southwestward and southward along the western side of Barnegat Bay, to the drawbridge just north of Toms River. It is marked by buoys and beacons, has ample width, and is easily followed.

The waterway leads 270 yards southeastward of Coates Point, then southward and southeastward across the entrance of *Toms River*, about 350 yards northeastward and $\frac{3}{8}$ mile eastward of Good Luck Point, and then leads for the draw at Barnegat Pier. There are several beacons to mark the channel across Toms River, and the channel is buoyed to the bridge.

From the draw the best water favors the western side of Barnegat Bay for 10 miles until off the mouth of *Double Creek*, marked by a group of houses at the mouth. From about midway between Clam Islands and the western shore, it follows the natural channel south-southeastward and southward, passing about 300 yards eastward of Sloop Sedge, and 200 yards eastward of Sandy Island, as shown on the chart. It then leads about $\frac{1}{4}$ mile off the marsh abreast Harvey Cedars, then southwestward and passes about 200 yards eastward of Carvel Island, and the same distance eastward of Pettit Island.

From Pettit Island the waterway follows the natural channel close along the marsh, eastward of all the islands at *Cedar Bonnet*, then westward for about $\frac{3}{4}$ mile, northwestward for $\frac{1}{4}$ mile, and then follows the natural channel westward between Reed Island and Poplar Point. The channel then leads along the western side of the bay to *Long Point*, marked by a group of three houses.

It passes close southeastward of Long Point and leads south-southwestward for 1 mile, then follows the natural channel south-southeastward for $1\frac{1}{2}$ miles to the can buoy in the channel off Beach Haven. The difficult part of the channel from above Sloop Sedge to Poplar Point is marked by beacons and buoys, and the remainder by buoys.

BEACH HAVEN TO ATLANTIC CITY, DISTANCE 20 MILES, LEAST DEPTH $4\frac{1}{2}$ FEET.—From the can buoy off Beach Haven, the inland waterway follows the natural channel south-southwestward along the beach and close to *Tucker Point* (north end of Tucker Island), marked by a clump of cedar bushes. The channel here is narrow and difficult, but is well marked by beacons and buoys.

From Tucker Point the waterway leads west-southwestward across the channel, then westward through *Shooting Thoroughfare* for about $\frac{3}{4}$ mile, then west-southwestward south of Seven Islands for nearly 1 mile. The channel from Tucker Island to this point is marked by buoys.

From the channel southward of Seven Islands the waterway leads northwestward for about $1\frac{1}{2}$ miles, southwestward for about $\frac{7}{8}$ mile, and southward for a little over $\frac{1}{2}$ mile to Main Marsh Thoroughfare. The depth across *Great Bay* is about $4\frac{1}{2}$ feet, and the channel is marked by buoys and pairs of beacons and stakes at frequent intervals.

From Great Bay the channel leads through *Main Marsh Thoroughfare*, then southwestward for $\frac{1}{2}$ mile, then southward between Shad Island and the marsh westward, then across the mouth of Perch Cove and close around the marshy point between Little Bay and Grassy Bay, and then close along the western side of *Grassy Bay*. It leads through the second opening from the western end of the ruins of an old bridge crossing Grassy Bay and westward of the two islets below the bridge.

From the south end of Grassy Bay the waterway trends south-southwestward for 1 mile across *Eagle Bay* to the mouth of a cut-off channel through the long narrow island westward of Golden Thoroughfare. It passes through this cut, which is marked by a shanty on the west side, then trends southward nearly for Absecon lighthouse, and passes eastward of a small island and southeastward of the large island to *Rum Point*. The latter is marked on its northeast

end by a slatted day beacon, and on its south end by a house. Passing 300 yards southward of Rum Point boats can haul across south-southwestward for Gardners Basin at Atlantic City.

From Rum Point the inland waterway trends northwestward for $\frac{3}{4}$ mile to the mouth of *Beach Thoroughfare*, marked by a small hotel on the small island on its north side. It follows Beach Thoroughfare westward and southwestward for $1\frac{1}{2}$ miles to a broadening with a small island in the northwest end, passes northward and westward of this island, and follows the thoroughfare southeastward to the first bridge and in midchannel between the bridges.

There is a shoal, bare at low water, a little southward of midchannel, about 300 yards southwestward of the last draw. It can be avoided by keeping close along the south shore.

The waterway from Main Marsh Thoroughfare to the bridges at Atlantic City is marked by stakes and beacons, except the open water from Rum Point to Beach Thoroughfare, which is buoyed.

ATLANTIC CITY TO OCEAN CITY, DISTANCE 11 MILES, LEAST DEPTH 6 FEET.—From the bridges on the west side of Atlantic City the channel leads west-southwestward across the expansion of Beach Thoroughfare and follows the narrow thoroughfare along the beach for $1\frac{1}{2}$ miles to *Ventnor*. Just westward of a standpipe and chimney of the same height the waterway enters *Ventnor Canal* and leads northwestward for $\frac{3}{4}$ mile to Beach Thoroughfare, which it follows southwestward for 3 miles to the south end of Risley Channel.

Boats bound to *Longport* can continue in mid-channel southwestward to the wharves, but the inland waterway leads westward of the small island in the mouth of *Risley Channel* and northwestward in the channel for $\frac{1}{2}$ mile above the island to the mouth of a canal leading southwestward to Broad Thoroughfare.

The channel leads southwestward through the canal and *Broad Thoroughfare* for $1\frac{1}{4}$ miles, then southward across the open water to the north point of the beach at Ocean City, and then along the bulkhead on the northwest side of *Ocean City* to the wharves. It is marked by buoys in the more open waters and by stakes and beacons in the narrow channels.

OCEAN CITY TO ANGLESEA, DISTANCE 25 MILES, LEAST DEPTH ABOUT 5 FEET.—From the bridges at Ocean City the channel leads southeastward of an islet a little below them, then close around the south end of Cowpens Island, and westward to the north end of Shooting Island. The standpipe is nearly astern on this reach.

It then leads through *Back Thoroughfare* for $\frac{3}{4}$ mile, and then westward between the two islands just southwestward of Shooting Island. It follows the shore of the southern island to its western end, leaving three small islands on the starboard hand, and then leads southwestward across *Peck Bay* to a drawbridge at its south end.

From the bridge the channel leads southward through a cut-off channel 300 yards long to *Crook Horn Thoroughfare* and follows this southwestward to Devils Island. The channel has been straightened in several places. It leads southward along the east side of Devils Island and continues this course through an artificial cut to *Main Thoroughfare*, then westward through it and *Ben Hands Thoroughfare*, crossed by a bridge, and through Upper Thoroughfare to Ludlam Bay.

From *Upper Thoroughfare* the channel leads southward close eastward of an island, then between two smaller islands, then across the open water of *Ludlam Bay*, and through a short cut-off channel into the thoroughfare leading southward to the bridges at *Sea Isle City*. The openings to several private basins on the east side of the thoroughfare at Sea Isle City are passed. The channel continues southwestward for $\frac{1}{2}$ mile from the lower bridge to the mouth of a cut-off channel, then southward through the cut-off, and then follows the marsh on the east side to the north end of the railroad bridge crossing Townsend Inlet.

The waterway follows along the west side of the bridge at *Townsend Inlet* to near the draw at the south end. It then leads southwestward through *Ingram Thoroughfare*, across Long Reach, then westward through a short thoroughfare, and passes close around the point of marsh into *Leaming Bay*. The channel leads south-southwestward across the bay, then along the west side of *Gull Island Thoroughfare*, then follows the marsh on the northeast side to *Stone Harbor*.

From Stone Harbor the waterway leads southwestward along the northwest side of Great Channel to the mouth of *Dung Thoroughfare*. From here a channel good in 1914 for a depth of 4 feet at low water, and marked by buoys and stakes, leads along the southeast side of Nummy Island to Anglesea. It is much used by local boats but is difficult; strangers are advised to follow the main channel, which leads westward in *Dung Thoroughfare* and along the northwest side of Nummy Island to the broad channel leading to Hereford Inlet. To go to *Anglesea*, follow the broad channel southeastward and southward to the wharves just inside the inlet. *Gull Bar* is a shoal bare at low water, and there is good water on either side.

ANGLESEA TO COLD SPRING INLET, DISTANCE 7 MILES.—The depth is about 5 feet except at one place inside of Turtle Gut Inlet, where the depth is $2\frac{1}{2}$ feet. From the western point of Nummy Island, the channel leads westward and southward through *Grassy Sound Channel*, crossed by a drawbridge, to the northeast end of Grassy Sound, and passes between the large islands in the northeast end of the sound. The waterway follows a curved channel across *Grassy Sound*, passes through a drawbridge at its southwest end, and then follows Grassy Sound Channel southward to Holly Beach Bridge.

From the bridge the channel follows a narrow slough southwestward and westward between several small islands to *Richardson Channel*, and then down that channel to an island between it and Swann (Swain) Channel. The channel was originally a cut through the middle of this island; but in 1914 the cut had nearly filled, and the best water, $2\frac{1}{2}$ feet, led around the south end of the island.

From the southwest end of the cut through the island, the waterway leads southwestward across *Swann (Swain) Channel*, and through two artificial canals to the northeast end of Jarvis Sound. It then leads southwestward across *Jarvis Sound* and through *Middle Thoroughfare* to the eastern end of Cold Spring Harbor.

BARNEGAT BAY

is 26 miles long, and has a general depth of 6 to 8 feet along the western side, with extensive flats extending westward from the beaches. Boats of about 7 feet draft enter through Barnegat Inlet, and 6 feet draft from southward. The usual draft of boats frequenting the bay is 2 to 5 feet.

Bay Head is a village and summer resort at the head of Barnegat Bay. It is at present the head of navigation on the inland waterway, though work is in progress by the State of New Jersey to extend the waterway northward to Manasquan River. Bay Head is frequented by many motor boats up to 5 feet draft, and this depth can be carried to the town, the upper end being a dredged channel. The most prominent mark from inside or out is a black water tank, conical above and below.

Metedeconk River is navigable with a draft of 4 or 5 feet for 3 miles to the fork. There are no large settlements above Bay Head. For a distance of $\frac{1}{2}$ mile westward from Bay Head, until off the mouth of Beaver Dam Creek, the best water is close to the north shore.

Mantoloking is a summer resort, 2 miles southward of Bay Head. A highway drawbridge crosses the bay at this point. There is 6 feet of water at the wharf.

Kettle Creek has a depth of 4 feet in mid-channel to the fork. There are no wharves.

Mosquito Cove has a depth of 5 feet for a distance of 1 mile above the mouth, and 3 feet to near the head. There are no wharves.

Chadwick, *Lavallette*, and *Ortley*, are small summer resorts on the beach, 3, 4, and 5 miles, respectively, southward of Mantoloking. They are frequented by a few small boats in summer.

Seaside Heights is a summer resort on the beach, 6 miles southward of Mantoloking, and at the eastern end of a new highway bridge crossing the bay. There is little business from here by water. *Berkeley* is a small resort $\frac{3}{4}$ mile southward of it.

Toms River, the most important tributary of Barnegat Bay, is about 11 miles northward of Barnegat Lighthouse. There is a depth of 5 feet to the entrance, 6 feet in midchannel for $3\frac{1}{2}$ miles above the entrance, and 5 feet to the wharves at Toms River, a town at the head of navigation. The upper $\frac{1}{2}$ mile is through a dredged channel, which is subject to slight shoaling. The lower end of the river is frequented by a large number of pleasure boats up to 5 feet draft. There is considerable sea food and produce run to Toms River for shipment, and some outgoing freight. A railroad drawbridge crosses the river 2 miles above the mouth. In summer a small steamer connects the towns on Toms River with Seaside Park.

To enter Toms River from northward, round Coates Point just southward of the drawbridge, at a distance of 200 yards or more. Or from southward, follow the buoys of the inland waterway to Good Luck Point, and round it at a distance of 400 yards. From here the midriver is clear to the beginning of the dredged channel, which is marked by spoil banks to the head. Shoals make off from some of the sharp points in the river; the one extending from Long Point is marked by a red barrel buoy.

Island Heights is a summer resort on the high wooded point at the northern end of the bridge crossing Toms River. There is 5 feet at the several wharves eastward of the bridge, and 6 feet in the channel off the town, which is extensively used as an anchorage.

Pine Beach is a small post village at the south end of the bridge crossing Toms River.

Ocean Gate is a post office and small resort on the south side of Toms River, 1 mile inside the entrance.

Seaside Park is a summer resort on the beach southeastward of the mouth of Toms River, and just north of the eastern end of the railroad bridge crossing the bay. There is 4 feet at the public wharf and 5 feet at the clubhouse wharf, and these depths can be brought to them from westward. It is much frequented by cruiser yachts and small pleasure boats. A distinguishing mark is a black water tank with a low brick chimney close to it. The railroad which crosses the bay at this point runs northward along the beach and connects all the seaside resorts with New York.

Barnegat Pier, a small settlement at the western end of the railroad bridge from Seaside Park, is the headquarters for many fishing boats in summer. There is about 3 feet of water at the wharf. The buildings are prominent.

Potter Creek, on the west side $1\frac{1}{2}$ miles below the railroad bridge, is only used as an anchorage for small oyster boats. There is 4 feet of water in the mouth.

Cedar Creek, 3 miles below the Pennsylvania Railroad bridge, has a depth of 3 feet for 1 mile to the landing near the post village of

Lanoka. Above the entrance the channel favors the south side of the creek.

Forked River, a little over 4 miles northwestward of Barnegat Lighthouse, is frequented by boats of about 2 feet draft, and this depth can be carried in midchannel for $1\frac{1}{4}$ miles to the public landing on the north branch, just above the second fork. About 2 feet can be carried $\frac{1}{2}$ mile above, through a crooked channel, to the town of Forked River, a railroad station at the head of the north branch.

Oyster Creek has a depth of 1 to 2 feet and is little used.

Waretown is a village and railroad station, $\frac{3}{4}$ mile from the western shore of the bay, opposite Barnegat Inlet. A landing at the foot of the road leading from the town has 4 feet at its end. The approach is clear.

Barnegat Inlet, marked on the south side by Barnegat Lighthouse, had a depth across the bar in 1914 of about 6 feet. The deepest draft taken across the bar is about 7 feet at high water. The channel is marked by perpendicularly striped buoys which are intervisible, but is subject to change both in depth and position, and the buoys can not always be depended upon to mark the best water. Strangers usually take a pilot, either picking up a fisherman outside or setting signal and waiting for one from Barnegat City. With a smooth sea, it is usually safe for boats of 3 to 4 feet draft to enter by following the buoys.

Barnegat Inlet has been moving slowly southward for many years. The successive surveys show the channel leading across the bar to the point of the beach on the north side of the inlet, and then across to the lighthouse as shown on the chart, and this was the approximate position of the channel in 1914. Inside the inlet the channels are more stable, and there is good anchorage in the channel westward of the lighthouse. From the inlet the principal inside channel, which is buoyed and has a least depth of about 7 feet, leads westward and northward, as shown on the chart, until westward of Sedge Island, and then through Oyster Creek Channel. Local boats bound to Barnegat or southward usually leave the buoyed channel about midway between Clam and Sedge Islands and follow the slough westward and southwestward toward the mouth of Double Creek. It is unmarked, and strangers should not attempt to run it. There are no channels from the inlet southward between the islands except for small boats at high water.

Barnegat City, the terminus of the railroad on the south side of the inlet, is a summer resort with a permanent settlement of oystermen and fishermen. A privately dredged channel, with a depth of about 6 feet, leads from the main channel southward to the landings on the inner beach just inside the point.

Double Creek is on the western side of the bay, 4 miles westward of Barnegat Lighthouse. It is the headquarters of a large number of fishing and oyster boats, and some pleasure boats in summer. There is a dike on the north side at the entrance and a public landing just inside, where gasoline is obtainable. A channel 40 feet wide and 5 feet deep has been dredged from the mouth for three-fourths of a mile to the highway drawbridge, which is 1 mile from the town of *Barnegat*. There are public landings at the drawbridge. The channel leads 120 feet southward of the dike at the entrance, then midway between a bare spoil bank and the public landing on the north and the north end of Conklin Island on the south, then southwestward through a cut-off, then 50 feet southward of a spoil bank until the creek narrows, and then favors the north side. Small boats can go about one-half mile above the highway drawbridge. There is a prominent group of houses on the north side at the entrance and a black water tank at Barnegat.

Gunning River, 4 miles southwestward of Barnegat Lighthouse, has a depth of 3 feet for three-fourths of a mile and about 2 feet for one-half mile farther through a crooked channel. A draft of 2 feet can be carried to the mouth from eastward.

Harvey Cedars (*High Point P. O.*) is a summer resort and railroad station on the outer beach, 5 miles southward of Barnegat Inlet. A draft of 6 feet can be carried in the channel to abreast the village from northward or southward, but it is shoal close to shore.

MANAHAWKEN BAY TO GREAT BAY.

Manahawken Bay, 8 miles southward of Barnegat Inlet, has a large group of marshy islands on its eastern side. A railroad and a highway bridge cross the bay at this point, and each has a center pier draw eastward of the islands. The channel eastward and southward of the islands, on the line of the inland waterway, has been dredged to 6 feet. The bay westward of the islands has a ruling depth of 1 to 2 feet, but 6 feet can be carried from southward nearly to the bridges through a narrow unmarked channel.

Surf City is a railroad station and summer resort on the beach, just northward of the bridges. It is marked by a red water tank on a steel tower. The railroad extends northward along the beach to Barnegat City and southward through the small resorts of Brant Beach, Beach Haven Crest, and Beach Haven Terrace to Beach Haven.

Manahawken Creek, at the western end of the bridges, has only 1 foot of water at the mouth.

Manahawken is a town on the railroad, $2\frac{1}{2}$ miles westward of Manahawken Bay. The nearest approach by water is through *Mill*

Creek, which has a depth of about 2 feet for $1\frac{1}{2}$ miles to the foot of a road 2 miles from Manahawken.

The body of water between Manahawken Bay and Little Egg Harbor is shoal. There are sloughs leading along the beach from southward and westward, but they are poorly marked and a stranger should not attempt them. A channel with a least depth of 6 feet and well marked leads along the north and west sides.

Cedar Run, *Dinner Point*, and *West Creeks* are shoal at the mouth, usually about 2 feet, with a little deeper water inside. They are navigable for about $1\frac{3}{4}$ miles to within about $\frac{3}{4}$ mile of the small towns at their heads, which are located along the line of the railroad and main highway, and have roads leading down to the landings. They are frequented by small oyster and fishing boats and a few truck boats.

Beach Haven, a summer resort on the beach 6 miles northward of Little Egg Inlet, is marked by two black water tanks. A draft of 11 feet at low water can be carried to abreast the town from Little Egg Inlet, and about 4 feet to the wharf. It is frequented by many pleasure boats in summer, and is connected by boat with Tuckerton and Atlantic City. There is good anchorage in a depth of 15 to 25 feet in the channel westward of the town in the vicinity of the can buoy. In 1914 the channel from the can buoy to the town was staked. There is a small group of houses around Bond life-saving station, $1\frac{1}{2}$ miles southward of Beach Haven, and a small group around Tucker Beach Lighthouse.

Little Egg Inlet, 2 miles southward of Tucker Beach Lighthouse, had a depth of about 12 feet across the bar in 1914, and is extensively used by fish steamers up to 10 feet draft and many smaller schooners and motor boats. The shore and channels at the inlet are subject to rapid change, but the channel across the bar is comparatively stable. It is marked by perpendicularly striped buoys, which are intervisible until inside the inlet. There are no regular pilots, but strangers can usually pick up a fisherman outside to act as a pilot, or can set signal and wait for one from the life-saving station. Breakers form all the way across the inlet only in very heavy weather. There is good anchorage in a depth of about 8 fathoms in the channel northward of Sea Haven Light.

Little Egg Harbor, northward of the inlet, has a general depth of 4 or 5 feet along its northwest side, and is covered by oyster stakes. A draft of 10 feet can be carried from the inlet through *Marchelder Channel* southward of *Story Island*; the latter is marked by a fish factory on its southern end. A channel 6 feet deep has been dredged from the upper end of Marchelder Channel to the mouth of *Tuckerton Creek* and $1\frac{1}{4}$ miles up the creek to West Tuckerton Landing, 5 feet deep for $\frac{1}{3}$ mile to Scow Landing, and 3 feet deep for $\frac{1}{4}$ mile farther

to Tuckerton. In 1914 about 4 feet could be carried through the dredged channel to Tuckerton. The limit of speed in Tuckerton Creek for power boats or other vessels propelled by machinery is 6 statute miles per hour.

Tuckerton is a town with railroad connections at the head of navigation on Tuckerton Creek. It is frequented in summer by many boats, the usual draft of which is 2 to 4 feet. A black water tank in the town, and a tall radio mast 3 miles southwestward are prominent.

A draft of 4 feet can be taken to Tuckerton Creek from northeastward by passing northward of the extensive flats which extend northward from Story Island and the islands eastward. The northwest end of these flats lie $\frac{1}{4}$ to $\frac{3}{8}$ mile east-northeastward, and 400 yards southeastward of the point (marked by a shanty) on the north side of the bight at the entrance of Tuckerton Creek. Passing 250 yards off the point, steer west-southwestward to the dredged channel.

From southward, from abreast the north end of Tucker Island follow the channel which leads about $\frac{1}{4}$ mile from the western shore and through Marchelder Channel, southward and westward of Story Island, as shown on the chart. The bend southeastward of Story Island was well marked by barrel buoys and stakes in 1914. From close southwestward of *Parker Island* (marshy and without marks) the dredged cut to the mouth of Tuckerton Creek has a 324° true ($NNW \frac{3}{8} W$ mag.) direction, and is marked on both sides at frequent intervals by bush stakes or by posts with red or black barrels.

There are several thoroughfares leading from Little Egg Harbor to Great Bay. *Willett Thoroughfare* is used by small local boats but is shoal and should not be attempted by a stranger. *Sheepshead Creek* is shoal at the eastern end and is little used. *Little Sheepshead Creek* has a depth of about 4 feet and is extensively used.

Great Bay, northwestward of Little Egg Inlet, has a ruling depth of 4 to 6 feet. The main entrance is through *Shooting Thoroughfare*, eastward of Seven Islands, and has a depth of 8 feet. The line of the inland waterway passes southwestward of Seven Islands and through Main Marsh Thoroughfare. Great Bay is frequented by many small boats, and by fish steamers and schooners up to 9 feet draft at a good high water, bound to Mullica River. There is a fish factory on the east side of Shooting Thoroughfare, opposite Seven Islands.

Mullica River empties into the western side of Great Bay. It is navigable for 20 miles to *Pleasant Mills*. Fish steamers lay up in the river in winter, and there are many small local boats. An occasional schooner up to 8 feet draft loads wood or produce in the river for New York. A draft of $4\frac{1}{2}$ feet at low water and 9 feet at a good high water can be carried from the northern end of Shooting Thoroughfare across the flats in Great Bay to the mouth of the river. The most difficult place is off the mouth of Sheepshead Creek, where the channel is $\frac{1}{4}$

mile off the marsh northward of the creek and then follows the main slough westward, as shown on the chart. The shoals are sometimes marked by bush stakes.

There is deep water inside Mullica River and the mid-channel is clear for a long distance. A draft of about 9 feet at high water can be taken to *Crowleytown*, and about 2 feet at high water for about $3\frac{1}{2}$ miles farther to *Pleasant Mills*, where there are paper mills, 20 miles above the mouth. The navigation of the river is comparatively easy to Crowleytown, but shoal and difficult above. There are drawbridges across the river at the villages of *Lower Bank* and *Green Bank*, 12 and 14 miles, respectively, above the mouth.

Nacote Creek is a tributary on the south side of Mullica River, 4 miles above the mouth. *Port Republic* is a village at its head.

Bass River is a tributary on the north side of Mullica River, 5 miles above the mouth.

Wading River, on the north side of Mullica River 7 miles above the mouth, is the most important tributary. It is said to have deep water for several miles. *Bridgeport* (Wading River P. O.) is $4\frac{1}{2}$ miles above the mouth. A drawbridge crosses the river at this point.

BRIGANTINE INLET TO ATLANTIC CITY.

Brigantine Inlet is 7 miles northeastward of Absecon Lighthouse and 4 miles southwestward of Tucker Beach Lighthouse. It is nearly bare at extreme low water and has 5 or 6 feet at high water. It is not buoyed, and the only boats using it are small local oyster and fishing boats, and then only with a smooth sea and on a rising tide. Strangers should not attempt to enter. The life-saving stations are the only marks. The several thoroughfares leading from Brigantine Inlet are shoal at their western ends, and can only be navigated by small boats at high water. Strangers should not enter them.

Brigantine is a post office and small summer resort on the beach, midway between Brigantine and Absecon Inlets. It can be reached by small boats at high water from southward or northwestward, but the channels are difficult.

Little Bay and *Grassy Bay* are shoal, having large areas bare at low water. The inland waterway leads along the west side. Crossing Grassy Bay is an abandoned railroad bridge which has several clear openings, but the second opening from the western side of the bay is the one generally used.

Absecon Inlet is marked on the south side by Absecon Lighthouse and Atlantic City. In 1914 the inlet was good for a depth of about 7 feet. The channel is marked by buoys, easily intervisible, to an anchorage in the channel between the casino at the north end of Atlantic City and the bend northwestward of Rum Point. The channel is subject to some change, but the buoys are usually maintained in the best water. The shore on the south side is protected

from extensive change by artificial means. A project has been approved to dredge a channel across the bar to a depth of 12 feet and width of 300 feet, to be increased ultimately to 600 feet, but no work had been done in 1914.

Most of the business through Absecon Inlet is to Atlantic City, but there are some boats running to the town of Absecon, and to points north and south on the line of the inland waterway. The deepest draft of boats entering the inlet is the steamer from New York drawing 9 feet, and a few freight schooners drawing up to 8 feet, but they enter near high water. Strangers, unless of light draft, usually take a pilot, either picking up a fisherman outside, or signaling for a pilot from shore. If of not more than 4 or 5 feet draft, they can enter with a smooth sea and on a rising tide by following the buoys, keeping well away from rough water. Breakers extend across the inlet in heavy weather. The position of the channel in 1914 was approximately as shown on the chart.

Atlantic City is the largest resort on the Atlantic coast, and is frequented by many boats, both from outside and from points along the interior waterways. It has several railroad connections with the mainland, an electric road connecting it with Pleasantville, Somers Point, and Ocean City, and an electric road along the beach southward to Longport where boat connections can be made to Ocean City and points southward. In summer a steamer runs between Atlantic City and New York, and motor boats through the inside passage to Beach Haven and Tuckerton.

The casino at the north end of Atlantic City has a long wharf westward of it, with a depth of 12 to 15 feet, inside of which is a small basin with a depth of 2 to 4 feet, which is used only by fishing boats kept for hire.

Gardners Basin, a bulkheaded basin nearly $\frac{1}{2}$ mile long and 60 yards wide, has its entrance 500 yards westward of the casino. It has a depth of 8 feet in midchannel to the head, and is used by many motor boats. All boats make fast to the bulkheads, for which a small wharfage charge is made. All kinds of supplies are obtainable, and there are railways and machine shops.

Clam Creek is a narrow creek, the entrance to which lies 50 yards westward of the entrance to Gardners Basin. Seven feet can be carried 600 yards above the mouth to the steamboat wharf. Just above the steamboat wharf is a basin 400 yards long and 50 to 100 yards wide with a depth of 8 feet in the entrance and 10 to 20 feet inside.

There are also numerous wharves and boathouses on the west front of Atlantic City, along Beach and Inside Thoroughfares.

Reed Bay, 5 miles northward of Absecon Lighthouse, has a general depth of 1 to 2 feet, with large areas bare at low water. There are no wharves.

Absecon Bay, 4 miles northwestward of Absecon Lighthouse, has a general depth of 1 to 2 feet, and there are large areas bare at low water. A channel 80 feet wide and 5 feet deep has been dredged northwestward across Absecon Bay to the mouth of *Absecon Creek*, and 50 feet wide and 5 feet deep in the creek to *Absecon*, with a turning basin at the head. There are two fixed bridges just above the turning basin, the lower having 6.6 feet and the upper 5.1 feet headroom at low water.

From Absecon Inlet the channel to Absecon Bay leads southward and close westward of the island of which Rum Point is the south end, then northwestward until past Middle Thoroughfare, then west-southwestward, and passes between the long island lying southward of Sloop Thoroughfare and the island southwestward. The channel from the inlet to the west end of the long island lying southward of Sloop Thoroughfare is shown on the chart. The channel then trends northwestward along the south side of the next island (Siplers Island) and is marked on both sides by bush stakes. The dredged cut then leads 317° true (*NW. $\frac{7}{8}$ N mag.*) with Absecon Lighthouse astern across Absecon Bay to the entrance of Absecon Creek, and was marked in 1914 by pairs of bush stakes on the north side and single ones on the south side. The midchannel in Absecon Creek is clear to Absecon, a town on the railroad.

Beach Thoroughfare and *Inside Thoroughfare* are parts of the inland waterway along the northwest side of Atlantic City. There are a large number of boat houses and several wharves and industrial plants on them. A depth of 8 feet at low water can be carried from the inlet through Beach Thoroughfare to the western side of Atlantic City, and 6 feet from southward through the inland waterway.

Five drawbridges cross Beach Thoroughfare within a distance of $\frac{1}{4}$ mile. They are all center pier draws, both openings clear, and the least width of draw opening is 32 feet. The draws are low but have higher openings at the sides, least height about 5 feet at high water. The two northern bridges and the southern bridge are highway and street railroad bridges, and are opened at all times both day and night on signal.

The other two are railroad bridges which are opened only from 20 minutes after to 30 minutes after each hour between 6.30 a. m. and 9.20 p. m. From 9.20 p. m. to 6.30 a. m. the bridges are opened on signal unless a train is approaching. The signal for the railroad bridges is three blasts of a whistle or horn, to be answered by three blasts on the bridge if the draw is ready to be opened immediately, or two blasts if the draw is not ready to be opened immediately. Vessels of too great dimensions, or otherwise unable to pass within the 10-minute periods, must pass between 9.20 p. m. and 6.30 a. m.

ATLANTIC CITY TO OCEAN CITY.

Ventnor is a resort on the beach 3 miles southwestward of Absecon Lighthouse. It is marked by a standpipe and brick chimney of the same height, close together.

Ventnor Canal is a cut leading from Inside Thoroughfare at Ventnor north-northwestward to Beach Thoroughfare, and is a part of the inland waterway.

Lake Bay, 3 miles westward of Atlantic City, is shoal and little used. *Smith Landing*, on the northwest side, can only be reached by small boats at half tide or higher by following close around the east and north shores of the bay. *Pleasantville* is a town on the railroad $\frac{3}{4}$ mile northward of Smith Landing.

Risley Landing, on *Dock Thoroughfare*, 4 miles northward of Great Egg Inlet, can be reached with a draft of 6 feet or more from southward, but the wharf is in bad repair and is only used by small boats.

Scull Bay, $2\frac{1}{2}$ miles northward of Great Egg Inlet, has a depth of 1 to 2 feet, and 4 to 5 feet can be carried to it through Broad or Scull Thoroughfares. There is a landing on the northwest side at the foot of a road leading to *Linwood*, a village on the railroad $\frac{3}{4}$ mile from the bay.

Great Egg Inlet, $7\frac{1}{2}$ miles southwestward of Absecon Lighthouse, had a depth in 1914 of about 9 feet at low water in the buoyed channel across the bar. It is used by many yachts of 4 or 5 feet draft and local fishing and pleasure boats. The deepest draft entering is an occasional tugboat up to 9 or 10 feet draft. The shore line on the south side and the position of the channel are fairly stable, and the buoys usually mark the best water. Strangers of 4 or 5 feet draft do not usually take a pilot in smooth weather, but follow the buoys, preferably on a rising tide, being also guided by the appearance of the water. Pilots may usually be had from fishing boats outside, or from Ocean City in answer to signal. Breakers extend across the inlet in moderately heavy weather. In winter it is used only by a few fishermen, and is often rendered dangerous by floating ice.

The prominent landmarks in approaching Great Egg Inlet are: A black standpipe with white top and two iron chimneys close to it, showing over the buildings of Ocean City, $1\frac{1}{2}$ miles southwestward of the inlet; a black water tank on a steel tower at Longport, on the north side; a broad black standpipe about 1 mile farther northward; and a slender black standpipe about $\frac{1}{2}$ mile northward of the broad one.

Longport is a summer resort on the north side of Great Egg Inlet. It is connected with Ocean City in summer by a line of steamers, and with Atlantic City by an electric railway along the beach. The generally used channel from Longport to Ocean City follows the regular

inside route through Risley Channel and Broad Thoroughfare. With local knowledge, small boats sometimes cross the flats from Longport southwestward, close southward of the marsh, which is good for a draft of 4 or 5 feet at high water.

Ocean City, a large summer resort on the south side of Great Egg Inlet, has railroad and electric road connections with the mainland and southward along the beach to Stone Harbor. The wharves are on the northwest side, $\frac{1}{2}$ to $1\frac{1}{2}$ miles southwestward of the inlet, and have depths of 6 to 12 feet at the ends.

Great Egg Bay, extending 4 miles westward from Great Egg Inlet, is frequented by many boats of 5 feet or less draft bound to Somers Point and points in Great Egg and Tuckahoe Rivers. A highway and a railroad bridge cross the bay from Somers Point to Ocean City. There are draws in both bridges near Somers Point and in the channel along the Ocean City water front. The highway draws are single-lift openings and the railroad draws are center pier, both openings clear.

Somers Point, a summer resort on the north side of Great Egg Bay, is connected with Ocean City, Pleasantville, and Atlantic City by an electric railway. There is a depth of about 6 feet at the wharves.

Beesley Point is a small resort on the north side of the point between Great Egg and Peck Bays. There are landings with about 3 feet at the ends, and this depth can be carried to them from anywhere offshore. There is a prominent water tank and windmill near the eastern wharf.

The main channel in Great Egg Bay leads along the north side of the bay to the drawbridges at Somers Point, then $\frac{1}{4}$ mile east and $\frac{3}{8}$ mile south of Ledge Island, then favors the southwest side of the bay to the mouth of Middle River. It is marked from the inlet to the mouth of Tuckahoe River by perpendicularly striped buoys, and is easily followed by small boats.

A draft of 4 or 5 feet can be carried at low water between Rainbow Islands and the long narrow island southward of them, and into the main channel midway between Ledge Island and Beesley Point. It is not marked and the fixed bridges have a headroom of only about 4 feet at high water. At half tide or high water, small boats can cross Peck Bay and enter Great Bay close around the end of Beesley Point, but it is seldom done.

Great Egg River, emptying into Great Egg Bay from northwestward, is said to be navigable with a draft of about 6 feet at low water to within $\frac{1}{4}$ mile of the town of *Mays Landing*, about 17 miles above the inlet. A fixed bridge crosses the river at Mays Landing, and the channel is shoal and difficult for about $\frac{1}{4}$ mile below. There is little business by boat in the upper end of the river; the lower end is fre-

quented by small pleasure and truck boats and a few freight boats up to 5 feet draft.

Tuckahoe River, on the south side of Great Egg Bay, is said to have a depth of 3 feet to the town of *Tuckahoe*, 7 miles above the mouth. It is only frequented by small truck and pleasure boats.

Patcong Creek, west of Ledge Island, has a depth of about 2 feet at the mouth and deeper water inside for a long distance. It is principally used as a place to lay up boats in fresh water.

Middle River, 2 miles westward of Ledge Island, has a depth of 8 feet at the mouth, and is navigable for several miles, but is only frequented by small fishing boats.

OCEAN CITY TO ANGLESEA. "

Peck Bay, south of Great Egg Bay, has a general depth of 1 to 2 feet. A channel 6 feet deep has been dredged across the southeast side, and forms a part of the inland waterway. Two highway bridges close together cross the channel at the south end of the bay. The northerly one has a center pier draw, both openings clear, and the southerly one has a single slide draw 21.8 feet wide, but the bridge is unused and the draw left open.

Corson Inlet, 6 miles southwestward of Ocean City, had a depth across the bar in 1914 of about 5 feet. It is not buoyed and is only used by a few local fishing and pleasure boats up to 4 or 5 feet draft. The appearance of the water is the best guide, but the channel is subject to rapid change, and is not recommended for a stranger.

Peck Beach is a small group of houses without prominent marks, about 1 mile northward of Corson Inlet. It can only be reached by small boats at high water from westward.

Corson Inlet (Strathmere P. O.) is a village and railroad station on the south side of Corson Inlet. A yellow water tank is prominent. The channel from Corson Inlet northward into Main Thoroughfare is bare at low water, and is crossed by a fixed bridge. It is seldom used. The main channel leads southwestward through two drawbridges at Strathmere, then southward of a marshy island and close along the south shore to the east side of Beach Thoroughfare; it then leads north-northwestward for the south point of the marsh, and follows it to Ben Hands and Upper Thoroughfares. A draft of about 5 feet can be carried from inside the inlet to this point.

There are several thoroughfares leading southwestward to Ludlam Bay, but Upper Thoroughfare, on the line of the inland waterway, is the one generally used.

Ludlam Bay, 2½ miles southwestward of Corson Inlet, is shoal, but a channel dredged to a depth of 6 feet leads from Upper Thoroughfare southward across the bay to Ludlam Thoroughfare.

Sea Isle City is a summer resort on the beach about midway between Corson and Townsend Inlets. The most prominent marks are a slender standpipe, a gray brick stack $\frac{1}{4}$ mile southward of it, and two church spires farther south. Ludlam Beach Lighthouse, near the north end of the town, is not prominent by day.

The inland waterway leading along the west side of Sea Isle City has been dredged to a depth of 6 feet and is crossed by two drawbridges. There is a privately dredged basin just southward of the highway bridge, with a depth of 7 or 8 feet in the mouth and 12 feet inside.

Townsend Inlet had a depth across the bar in 1914 of about 4 feet. It is used by small fishing and pleasure boats and an occasional cruising yacht up to 5 feet draft, which only enter at high water and with a smooth sea. The channel and shore line are subject to considerable change and are moving southward at present. A railroad with a drawbridge on the south side crosses the inlet just inside the mouth. The channel is marked by perpendicularly striped buoys, but strangers generally take a pilot.

Townsend Inlet is a small resort just northward of the inlet. There are no prominent marks.

Avalon is a small resort on the south side of Townsend Inlet. A black water tank is the most prominent mark. A privately dredged channel leads from $\frac{1}{3}$ mile westward of the bridge southeastward across the marsh to the town and is said to have a depth of 10 feet.

Townsend Sound is shoal and only frequented by small oyster and fishing boats. A draft of about 6 feet can be carried to it through Townsend Channel.

Stites Sound has a depth of 1 to 2 feet and is little used.

Leaming Bay has ruling depths of 1 to 3 feet, and extensive areas bare at low water. A channel has been dredged to a depth of 6 feet from Paddys Thoroughfare on the northeast side south-southwestward to Gull Island Thoroughfare, and the traffic in the bay is along this channel, except for small oyster and fishing boats.

Peermont is a small resort on the beach $1\frac{1}{2}$ miles southwestward of Townsend Inlet.

Stone Harbor is a summer resort on the beach about 3 miles northeastward of Hereford Inlet. It is marked by a slender standpipe with a railing around the top. Boats run from here to Anglesea in summer. There is a depth of 15 to 25 feet in the channel off the town, and there are several privately dredged basins for small boats. A drawbridge with a single lift opening crosses Great Channel just southwestward of Stone Harbor.

Jenkins Sound, 3 miles northwestward of Hereford Inlet, has ruling depths of 1 to 2 feet. A depth of about 6 feet can be carried through Dead Thoroughfare and to within $\frac{1}{4}$ mile of *Shell Landing*,

on the northwest side of the bay, but it is bare at the landing at low water. Several small oyster and clam boats work from here. A depth of 5 feet can also be taken to the north end of the bay through Nicholas Channel. The village of *Cape May Court House* is on the line of the railroads and main highway $1\frac{1}{4}$ miles northward of Shell Landing.

Hereford Inlet, 6 miles northeastward of Cold Spring Inlet, is subject to rapid change and the buoys can not always be depended upon to lead in the best water. In 1914 there was a depth of 4 feet in the buoyed channel. The deepest draft of the boats entering the inlet is 6 feet. In the entrance there are large areas bare at low water and usually having a sand ridge showing at high water. They are covered with marsh grass in summer. Breakers form across the inlet in heavy weather and on the shoals at all times, and the appearance of the water is the best guide in entering. The inlet is used by many fishing boats and some strange yachts. Pilots can usually be obtained from fishing boats outside. Stone Harbor life saving station is the only mark on the north side of the inlet. There are buildings on the south side all the way from Hereford Inlet to Turtle Gut Inlet, and several prominent marks. Hereford Inlet Lighthouse is a tower on a dwelling and is not prominent by day. There is a slender black standpipe $\frac{1}{4}$ mile westward of it.

Anglesea is a summer resort on the south side of Hereford Inlet, and is frequented by a large number of party fishing boats. There are several wharves along the water front northwestward of the life saving station.

ANGLESEA TO COLD SPRING INLET.

Grassy Sound is the name of a summer settlement and post office at the railroad bridge crossing Grassy Sound Channel. Grassy Sound is generally shoal except in the slough connecting the two parts of Grassy Sound Channel.

North Wildwood, *Wildwood*, *Holly Beach* and *Wildwood Crest* are summer resorts on Five Mile Beach between Hereford and Turtle Gut Inlets. There are a water tank and a slender standpipe close together at Wildwood. North Wildwood and Holly Beach can be reached through privately dredged canals, the former from the middle of Grassy Sound, and the latter from Grassy Sound Channel near the mouth of Post Creek. There are wharves at Holly Beach bridge and at Wildwood Crest. Boats from southward bound to the wharf at Wildwood Crest can pass close around the south end of Ephraim Island at high water, but at low water must pass northward and eastward of the island. Boats make regular trips from Holly Beach and Wildwood Crest to Cold Spring Inlet in summer.

Turtle Gut Inlet was nearly bare at low water in 1914, and a permit has been issued to a land development company to close the inlet with a jetty.

Cold Spring Inlet, $4\frac{1}{2}$ miles eastward of Cape May Lighthouse, has been improved by building two parallel stone jetties 850 feet apart, and dredging a channel 400 feet wide and 25 feet deep midway between them to Cold Spring Harbor inside. In December, 1914, a shoal with 10 feet over it extended more than halfway across the entrance from the end of the east jetty, and there was a least depth of about 19 feet in the channel between the shoal and the end of the west jetty. There is secure anchorage in the widening just above the casino and wharf, located at the inner end of the west jetty; but 10 feet is about the deepest draft that can be safely taken to the anchorage.

To enter *Cold Spring Inlet*, favor the end of the west jetty, then pass midway between the jetties, and pass not over 300 feet off the wharf at the casino to avoid a shoal, bare at low water, which extends halfway across from the opposite side, just above the casino. Then pass in midchannel westward of a marshy islet, and anchor 200 yards northwestward of the islet and about $\frac{1}{4}$ mile from the casino, bearing about 173° true (*S* mag.).

Cold Spring Harbor has been improved by private enterprise under a project to create a basin of about 500 acres with a depth of 30 to 40 feet. In 1914 it had general depths of 15 to 35 feet but there are several shoal spots left in the dredging, and some local knowledge is required to avoid them. Each is usually marked in summer by a row of bushes. A depth of about 4 feet can be taken to the landing at the bridge crossing Cape Island Creek. Gasoline and some provisions can be obtained here, and there is a railway for hauling out motor boats. There is an electric railway connecting the inlet and the landing on Cape Island Creek with Cape May and Cape May Point.

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31

	Page.		Page.
Mays Landing.....	24	Seull Bay.....	23
Metedeconk River.....	14	Sea Isle City.....	13, 26
Middle River.....	25	Seaside Heights.....	14
Middle Thoroughfare.....	14	Seaside Park.....	15
Mill Creek.....	17	Seven Islands.....	19
Mosquito Cove.....	14	Shad Island.....	11
Mullica River.....	19	Shark River Inlet.....	5
N.		Sheepshead Creek.....	19
Nacote Creek.....	20	Shelf Landing.....	26
North Wildwood.....	27	Shooting Thoroughfare.....	11, 19
Nummy Island.....	13	Sloop Sedge.....	10
O.		Smith Landing.....	23
Ocean City.....	12, 24	Somers Point.....	24
Ocean Gate.....	15	Stites Sound.....	26
Ortley.....	14	Stone Harbor.....	13, 26
Oyster Creek.....	16	Story Island.....	18
Oyster Creek Channel.....	16	Strathmere.....	25
P.		Supplies.....	6
Parker Island.....	19	Surf City.....	17
Patcong Creek.....	25	Swann Channel.....	14
Peck Bay.....	12, 25	T.	
Peck Beach.....	25	Tides.....	7
Peermont.....	26	Toms River.....	10, 15
Perch Cove.....	11	Townsend Inlet.....	13, 26
Pilots.....	6	Townsend Sound.....	26
Pine Beach.....	15	Tuckahoe.....	25
Pleasant Mills.....	19	Tuckahoe River.....	25
Pleasantville.....	23	Tucker Island.....	11
Poplar Point.....	11	Tuckerton.....	19
Port Republic.....	20	Tuckerton Creek.....	18
Potter Creek.....	15	Turtle Gut Inlet.....	28
R.		U.	
Reed Bay.....	21	Upper Thoroughfare.....	13, 25
Repairs.....	6	V.	
Richardson Channel.....	14	Ventnor.....	12, 23
Risley Channel.....	12	Ventnor Canal.....	12, 23
Risley Landing.....	23	W.	
Rum Point.....	11, 20	Wading River.....	20
S.		Waretown.....	16
Sandy Hook to Barnegat Inlet.....	5	West Creek.....	18
Sandy Island.....	10	Wildwood.....	27
		Wildwood Crest.....	27
		Willett Thoroughfare.....	19